

# **SOUTH COUNTY COMMUTER RAIL**

Transit Oriented Development:  
An Opportunity to Shape Regional Growth

APRIL 1, 2005



*Project supported by the  
RI Statewide Planning Program  
with funding by the  
US Department of Transportation  
Federal Highway Administration*

Conducted by:

**Pare Engineering Corp.**  
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Lincoln RI 02865



# Transit-Oriented Development Planning Strategy

- Transit-oriented development (TOD) and transit-supportive design (TSD) land use planning creates an environment around a transit stop or station that supports pedestrian activities and transit use by providing for a mix of land uses (e.g., residential, retail, commercial, parking, etc.) in a safe, clean vibrant and active place.
- Transit supportive planning can be a community's most effective tool in achieving a balance of land use, transportation and open space interests in an environmentally sensitive manner, while managing growth and change.



# Project Objectives

- Provide a process for Washington County towns to *collaboratively and proactively plan for regional growth* impacts related to extension of commuter rail.
- Utilize Wickford Junction as a *prototype* for assessing whether TOD and TSD planning strategies can serve as a model at future commuter Washington County rail stations
- Educate the public and local officials about the *land use and development issues associated with commuter rail service*, and of the *opportunities afforded by TOD* to foster compact development patterns and avoid the negative environmental impacts associated with sprawl-type development.



# Project Purpose

- Support the development of a TOD planning strategy for Washington County, RI.
- Foster public awareness of potential opportunities for transit-oriented development as a growth management tool.
- Provide data, findings, and recommendations to promote TOD in conjunction with expansion of commuter rail service for incorporation into local comprehensive plans.



# Task 1

- Assessment of Commuter Rail Extension
- Advantages and Impacts and TOD Feasibility

# Task 2

Develop a model for application of TOD/TSD techniques appropriate to Wickford Junction, and create a Smart Growth Strategy for the surrounding areas likely to be impacted by the planned commuter rail service extension.



# Task 3

## Public Outreach and Awareness

- First workshop – March 3, 2005
  - Conduct an Expert Panel as part of Task 1
- Second public meeting – May 2005
  - Present draft concepts on TOD and smart growth techniques as part of Task 2.



# **SOUTH COUNTY COMMUTER RAIL: AN OPPORTUNITY TO SHAPE REGIONAL GROWTH PUBLIC WORKSHOP**

**Thursday, March 3, 2005  
7:00 – 9:00 PM**

***NORTH KINGSTOWN SENIOR CENTER  
10 BEACH STREET  
NORTH KINGSTOWN, RI***



Information on the proposed MBTA commuter rail extension to Wickford Junction will be provided. A panel discussion will follow focusing on the potential impact to Washington County land use. Panel participants include transportation specialists, Smart Growth advocates, and local realtors.

Transit-oriented development concepts and other smart growth techniques for managing growth will be developed in later project phases. These tools will be developed for use by all Washington County towns to proactively anticipate and plan for the impacts of commuter rail extension into the region.

***Sponsored by:***



**Town of North Kingstown Planning Department  
Washington County Regional Planning Council  
Rhode Island Statewide Planning Program**



Pare Engineering Corporation



The Town of North Kingstown will provide interpreters for the hearing impaired, provided a request is received at least three (3) days prior to the meeting by calling 294-3331, Extension 120.





# March 3, 2005 Workshop Overview

Part 1: South County Commuter Rail Service

Part 2: Assessment of Growth Potential

Part 3: Expert Panel

- Land Use
- Real Estate
- Commuter Rail

Part 4: Public Comment



# Part 1: Overview

## Assessment of Commuter Rail Extension Advantages

- Pilgrim Partnership
- Wickford Junction Station
- Demand
- SCCRS Schedule
- Ridership Projections
- Supporting State and Local Plans
- Previous Studies

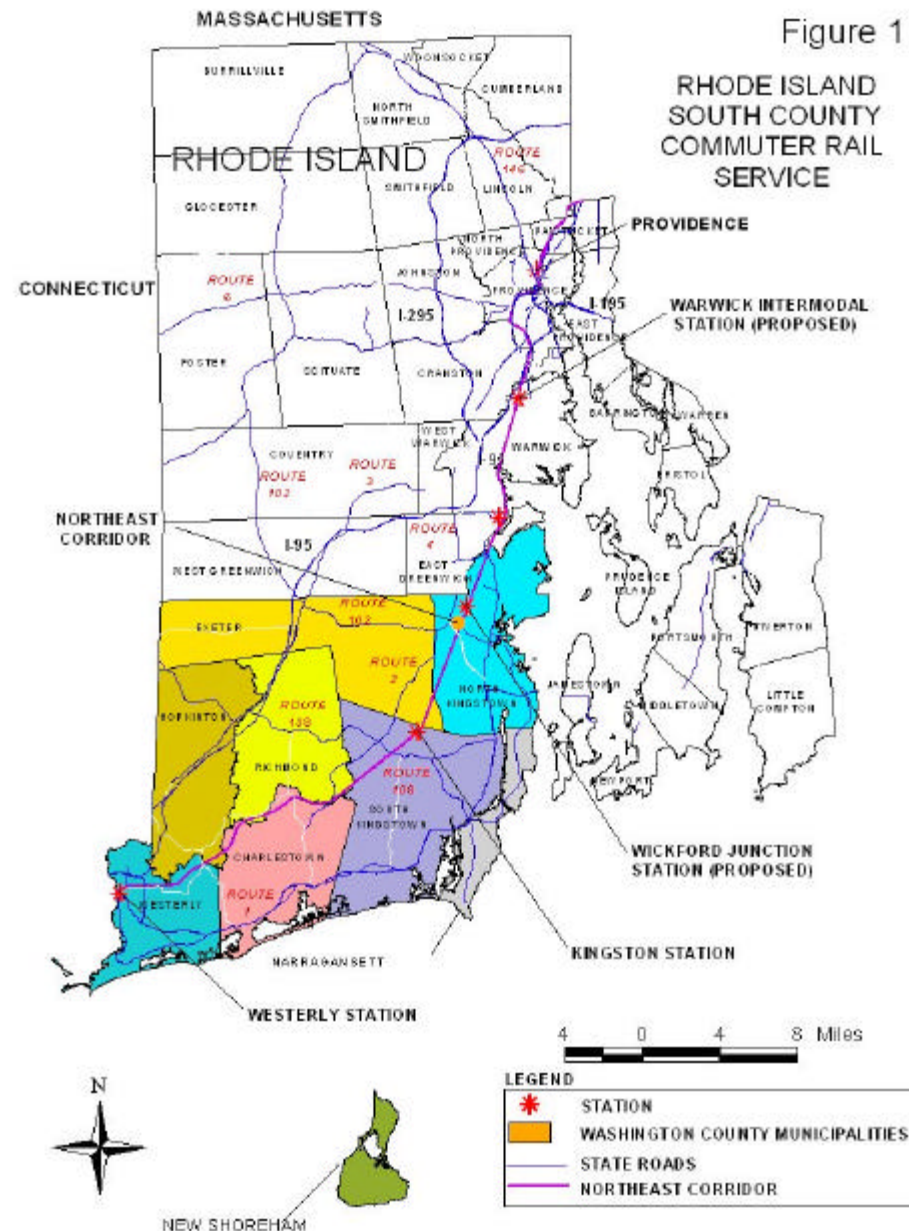


# Northeast Corridor

- MBTA commuter rail service to Wickford Junction, Warwick from Providence and Boston
- Amtrak service along Northeast Corridor
- Future commuter rail extension to Washington County
- Freight Rail Improvement Project



Figure 1



# Pilgrim Partnership Agreement

- 1988 commuter rail service to Providence and Boston
- 1995 additional service added, 10 year contract extension
- Pilgrim Partnership II – through 2009
- Phase I: TF Green Airport and Wickford Junction

Wickford Junction Station –  
first priority for service



# Wickford Junction Station

- 18 miles to Providence
- 58% of total ridership
- Public/Private Partnership – Wickford Junction Plaza
- Station improvements
  - Partial canopy
  - Platform
  - Structured / surface parking – 1,000 cars
- 2007 MBTA service start



# Rail Demand

## National Commuting Patterns (1970 to 2000)

- Average household size declined from 3.1 to 2.6
- Average number of vehicles/household increased from 1.3 to 1.7
- Percentage of workers per household increased from 38% to 46%
- Vehicle ownership of 2 or more vehicles/ household increased from 35% to 55%

*More households, more cars, more jobs  
= more traffic*



# Washington County Commuting Patterns

- 12.4% increase in population (1990-2000)
- New housing units represents almost one-third (7,963) of the State's total (25,265)
- As population has shifted to more rural areas, commuting travel times and distances have increased
- Approximately 5,070 workers from Washington County commute into Providence daily
- Approximately 1,476 continue further on to MA
- The number of Washington County commuters who drive a vehicle alone to work has outpaced the state average





# Proposed Inbound Schedule

<b>Train #</b>	<b>Leave Wickford Junction</b>	<b>Leave Warwick</b>	<b>Leave Providence</b>	<b>Arrive Boston</b>
802	5:44 AM	5:55 AM	6:07 AM	7:19 AM
804	6:12 AM	6:23 AM	6:35 AM	7:47 AM
806	6:45 AM	6:56 AM	7:08 AM	8:12 AM
810	7:47 AM	7:58 AM	8:10 AM	9:23 AM
816	1:43 PM	1:54 PM	2:06 PM	
822	6:16 PM	6:27 PM	6:39 PM	
824	8:30 PM	8:41 PM	8:53 PM	
826	9:52 PM	10:03 P	10:15 P	



# Proposed Outbound Schedule

<b>Train #</b>	<b>Leave Boston</b>	<b>Leave Providence</b>	<b>Leave Warwick</b>	<b>Arrive Wickford Junction</b>
887		5:11 AM	5:23 AM	5:34 AM
801		5:39 AM	5:51 AM	6:02 AM
803		7:14 AM	7:26 AM	7:37 AM
809	12:05 P	1:10 PM	1:22 PM	1:33 PM
815	4:35 PM	5:43 PM	5:55 PM	6:06 PM
817	5:00 PM	6:06 PM	6:18 PM	6:29 PM
819	5:40 PM	6:42 PM	6:54 PM	7:05 PM
823	6:50 PM	7:57 PM	8:09 PM	8:20 PM



# MBTA Commuter Rail Schedule

*Note: Proposed schedules are placeholders only and subject to change. Schedules must “marry” the Providence schedule as service to South County is an extension of Boston to Providence service.*


## General comments:

- Attractive service to Boston
- Providence service not as attractive since it generally serves a longer than 8-hour work day
- No “reverse commute” opportunities to Washington County destinations
  - No weekday service to local employment
- No weekend service
  - No weekend tourism-based service



# Ridership Projections, 2010

SCCRS	Providence	Boston	Total
Westerly	258	65	323
Kingstown	1,130	68	1,198
<b>Wickford</b>	<b>1,578</b>	<b>288</b>	<b>1,866</b>
Warwick	897	677	1,574
Total	3,863	1,098	4,961



# State and Local Plans

Commuter rail service is supported in the following plans:

- *Transportation 2025*
- Town of North Kingstown, Comprehensive Plan Update – 2002
- North Kingstown Town Resolution - 1999



# Previous Studies

- RI Rail Corridor Feasibility Study – 1994
- Final Environmental Impact Statement/Report
- Northeast Corridor Improvement Project  
Electrification, New Haven, CT to Boston, MA – 1994
- South County Commuter Rail Service Executive  
Summary, Operations Plan – 2001
- South County Commuter Rail Environmental  
Assessment - 2003



# Part 2: Overview

## Assessment of Growth Potential

- Population
- Land Use
- Housing
- Build-out Analysis
- Similar Projects



# Assessment of Growth Potential

- Commuters typically do not drive south to reach a station when the trip is northbound
- 10 minute drive radius
  - Eastern Exeter
  - Southern North Kingstown
- Adjacent communities
  - Jamestown
  - Narragansett
  - South Kingstown







#### LEGEND

--- Town Line

— Highway/Road

--- Rail Line

Land Use

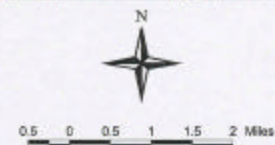
Yellow Potential Developable Land

Red Residential Areas

### Figure 1 10 MINUTE DRIVE RADIUS

WASHINGTON COUNTY  
TRANSIT-ORIENTED DEVELOPMENT  
PLANNING STRATEGY

Washington County Regional Planning Council  
RI Statewide Planning Program  
Town of North Kingstown



**PARE**

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**RIGIS**



# Population Change, 1990 to 2000

<b>Community</b>	<b>1990 Population</b>	<b>2000 Population</b>	<b>Percent Change</b>
Charlestown	6,478	7,859	27.4
Exeter	5,461	6,045	10.7
Hopkinton	6,873	7,836	14
Narragansett	14,985	16,361	9.2
New Shoreham	836	1,010	20.8
North Kingstown	23,786	26,326	10.7
Richmond	5,351	7,222	35
South Kingstown	24,631	27,921	13.4
Westerly	21,605	22,966	6.3
<b>Washington Cty</b>	<b>110,006</b>	<b>123,546</b>	<b>12.4</b>
Jamestown	4,999	5,622	12.5
<b>Rhode Island</b>	<b>1,003,464</b>	<b>1,048,319</b>	<b>4.5</b>



# Population Density, 2000 to 2030

## Persons Per Square Mile

<b>Community</b>	<b>2000</b>	<b>2030</b>
Charlestown	214	289
Exeter	105	130
Hopkinton	182	213
Narragansett	1,160	1,437
New Shoreham	81	141
North Kingstown	602	694
Richmond	178	250
South Kingstown	489	609
Westerly	725	896
Jamestown	226	281



# Land Use

RI trend characterized as one of declining urban population and suburban expansion

- State population grew 10% from 1970-2000, while vehicle miles traveled (VMT) grew by 70% during the same time period
- From 1970-1995, residential acreage grew from 89,000 acres to 140,000 acres, a 57% increase over 25 year period



# Land Use

- Transportation and role on development patterns – second only to water supply in its influence on development
- Exeter – residential largest land use
- North Kingstown - 'small town feeling'



# Housing

## Exeter

- 83% single family in 2000; 78% in 1990
- 13% mobile homes

## North Kingstown

- 72% single family in 2000; 67% in 1990
- Recent construction:
  - 95% single family
  - 81% in cluster subdivisions
  - Over 40% of new development in the southwest corner of Town



# Housing

- Percentage increase for housing units outpacing percentage increase in population for Washington County communities
- The State has added two units of housing for every one addition in population between 1970-1995

**In Exeter and North Kingstown, single-family detached homes are representative of the majority of the current housing stock**



# Build-out Analysis

One assessment of the potential absorption or capacity for growth, given certain parameters and assumptions.

- Not a prediction of growth
- Not a timeline for growth
- Does not reflect the influence of commuter rail service

*Part of the Comprehensive Planning process*





# Build-out Analysis Exeter

- Large lot zoning
- Limited roadway connections
- No municipal sewer/ water

638 potential single family homes within  
10-minute drive of station



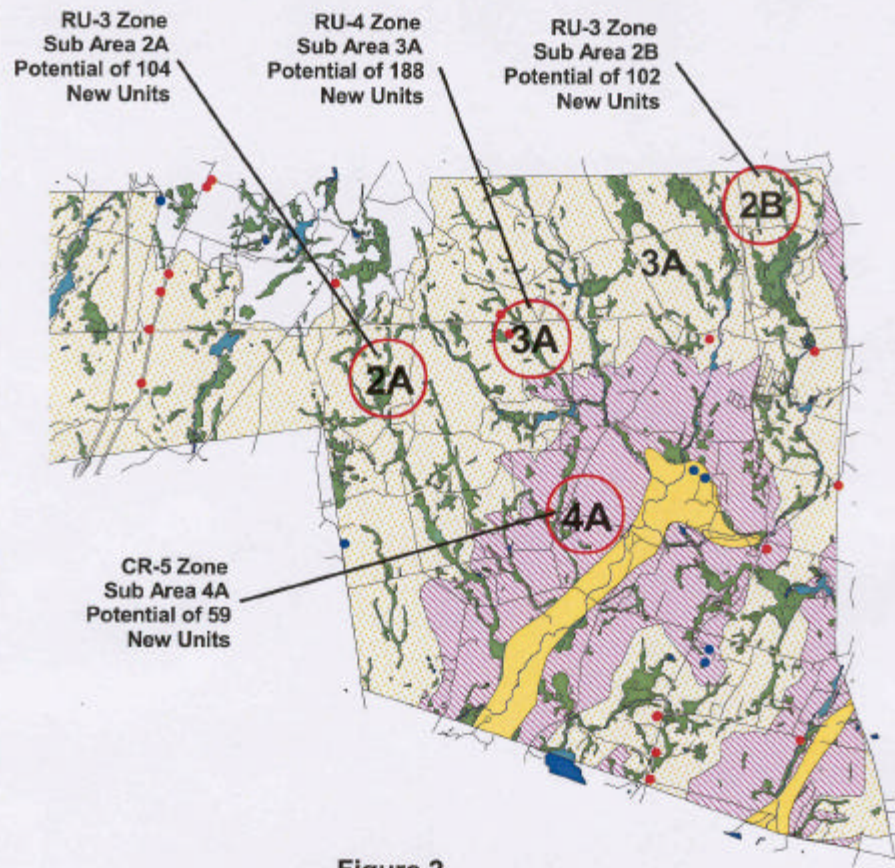
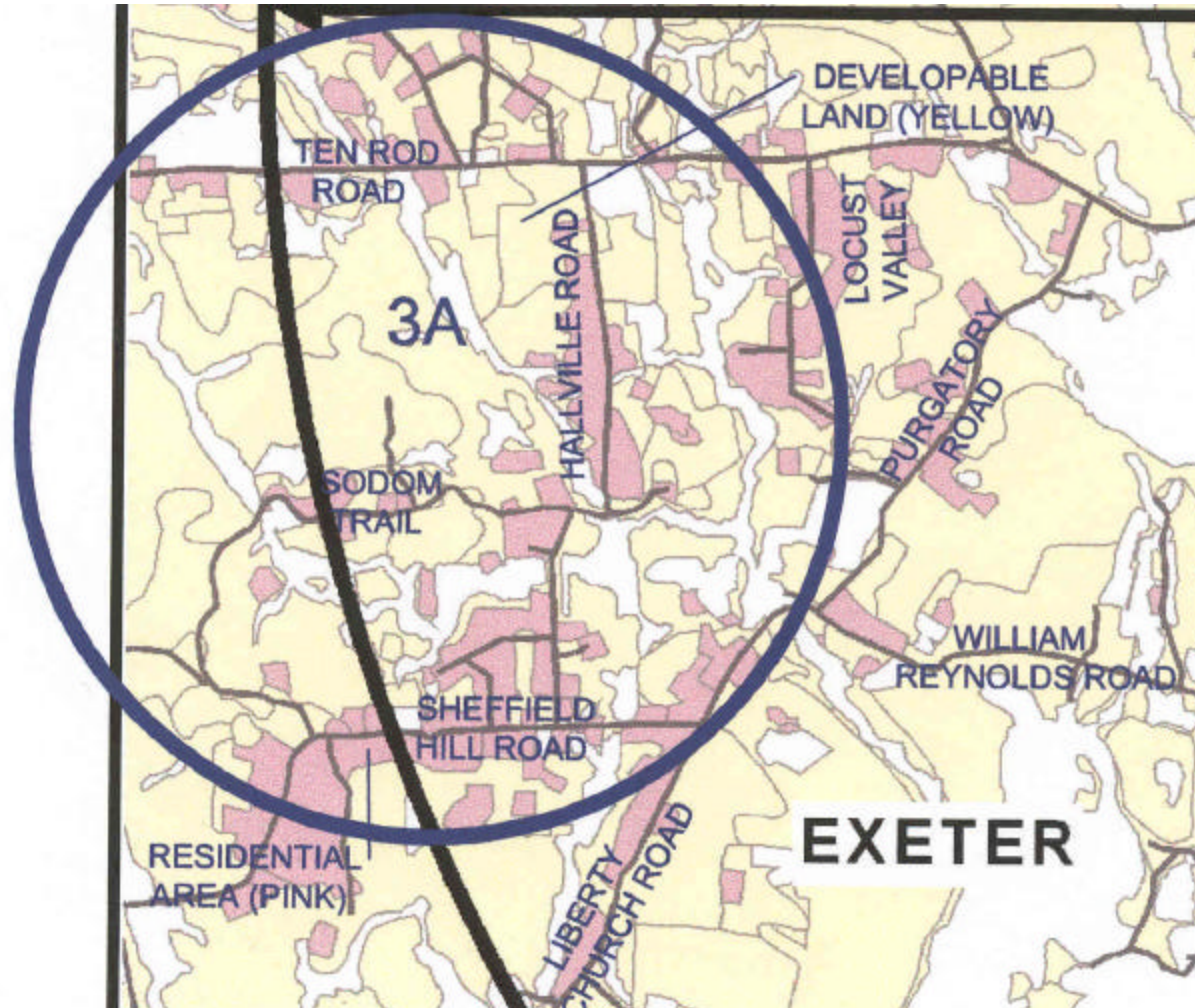


Figure 2  
**Growth Areas & Constraints**  
**EXETER**



# Exeter: Planning District II, Sub-area 3A



# Build-out Analysis North Kingstown

- No municipal sewer
- Aquifer Protection
- Conservation subdivisions

1,000 potential single family homes within  
10-minute drive of station





Plat Map #126  
50 Potential  
New Units

Plat Map #129  
30 Potential  
New Units

Plat Map  
#110, 34  
Potential  
New Units

Plat Map #53  
32 Potential  
New Units

Plat Map #65  
60 Potential  
New Units

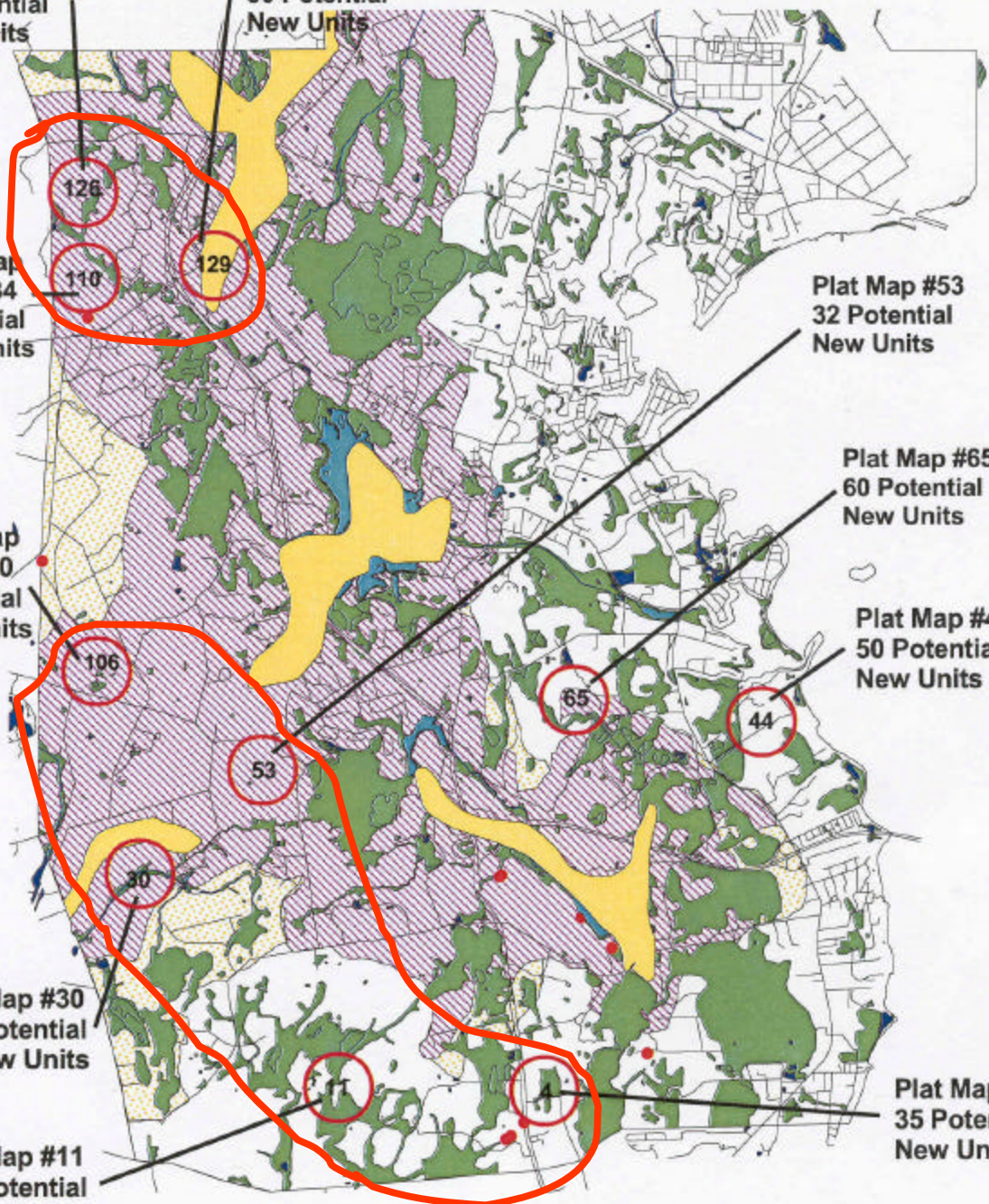
Plat Map #44  
50 Potential  
New Units

Plat Map  
#106, 30  
Potential  
New Units

Plat Map #30  
35 Potential  
New Units

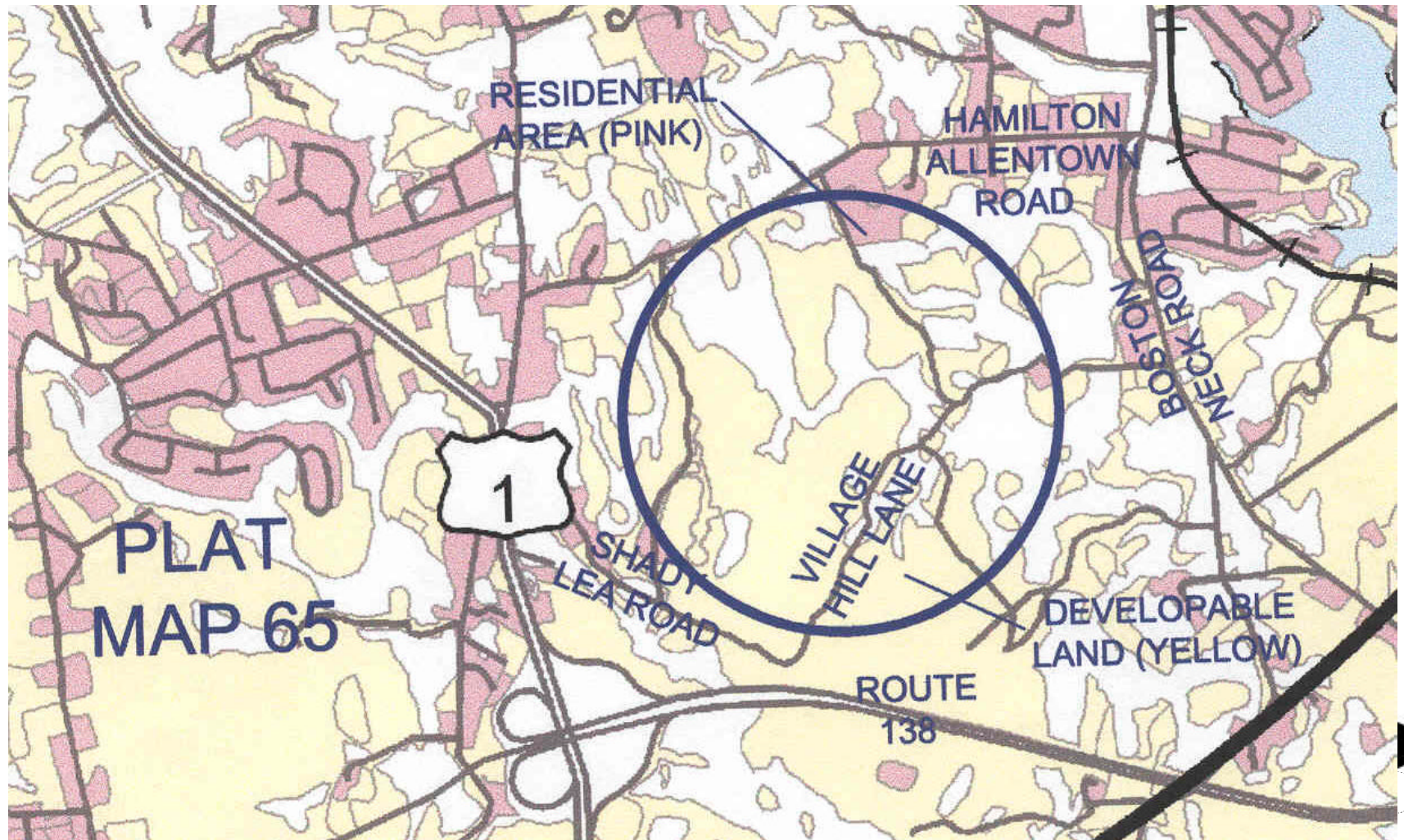
Plat Map #4  
35 Potential  
New Units

Plat Map #11  
48 Potential  
New Units





# North Kingstown: Plat Map 65



# Similar MBTA Commuter Rail Projects



Figure 18: MBTA Commuter Rail Station



# Stoughton to New Bedford – Fall River

- Projected daily ridership: 4,280
- 2005 service start may be delayed
- Task Force
  - Transit generates development
  - Growth management or catalyst for development?





# Ashland-Southborough- Westborough-Grafton

- Line exceeds 11,000 passengers daily
- Worcester Line west of Framingham
  - Addition of four new stations - 2002
  - Grafton - 2000
- Weekday, weekend service
- Grafton home value increase 76% in five years  
(homes in other MBTA service area communities increased an average of 66%)



# Part 3: Expert Panel

George Johnson, Assistant Chief – RI Statewide Planning

Sheila Brush, Director of Programs – Grow Smart RI

Scott Millar, Exeter Planning Board

Sheila Verdi, Realtor – Post Road Remaxx

Julia Techentin, Realtor – H. D. Randall Realtors

John LaPoint, MBTA Advisory Committee Member – Grafton, MA



## George Johnson, Assistant Chief – RI Statewide Planning

The State views commuter rail as an important amenity for the region and State as a whole, as an important transportation investment. It is part of the State's long-range plan, with hopes to unify the state. It is an important alternative to single-occupancy vehicle use, and for the future mobility in and around South County. Transportation corridors are nearing capacity: Routes I-95 in Warwick has 175,000 cars per day, and Route 4 has 95,000 cars per day. Route 1 in South County has seen traffic quadruple in the last 40 years. The extension to T.F. Green Airport is an important component of the State's economy.

Enhanced access will surely spur growth. It is important that communities have growth management techniques in place. Rail is an amenity and the reinstitution of commuter rail service will bring growth that is difficult to quantify.



## George Johnson – RI Statewide Planning (continued)

While we are using Transit Oriented Design (TOD) as the name of this study, it may be a misnomer. Wickford Junction is not being looked at for TOD in the sense that the term is understood in other parts of the country. We are **not** looking at 3,000 residential units or high-rise office towers; we **do** want to promote techniques that can help manage growth that may come with the rail. We want to encourage development that will support the investment in the rail service, but that is a good fit and makes the station an amenity for the community. For example, good pedestrian and bicycle connections to the station can help with traffic. We are disappointed to hear that the Town just voted against continuing planning for a bike path that would connect Wickford to the station.

RI has invested significantly in rail/infrastructure improvements with construction of the third track, which will facilitate commuter rail, the layover facility in Pawtucket and through studies and design to date.



# Sheila Brush, Director of Programs – Grow Smart RI

Smart Growth is well-planned land use that generally guides residential/commercial growth towards 'centers.' It brings with it neighborhood livability, better access to services, walkability/bikability, builds on investments already in place, preserves open space, expands economic opportunities, and lowers costs – both public and private.



## **Sheila Verdi, Realtor – Post Road Remaxx and Julia Techentin, Realtor – H. D. Randall Realtors**

Washington County is very attractive to new or perspective residents. Quality of life, the bay and ocean, the short commute to Providence is a great attraction. The village concept of Wickford Point is also a selling point. There is a scarcity/unavailability of homes. There are few condos available, and a good market for them.

There is a demand for an upscale condo-type development in the vicinity of Wickford Junction. Any housing type would be welcome, as North Kingstown has so much to offer.

As RI housing prices have increased in recent years, the attraction of the area to Massachusetts workers looking for affordable housing options has slowed. While the sales price may be lower in RI, higher local property taxes in RI may result in similar monthly housing costs.



## Scott Millar, Exeter Planning Board

The desirability of Exeter is based on its varied assets. Exeter has many acres of 'border land forests' – one of the last and largest unfragmented forest, the Queen's River – a large aquatic ecosystem, and rural character /landscape. People still make a living from farming the land in Exeter (or at least provide a good supplement). People can live in a rural community, yet still commute 25 minutes to Providence for work.

Even with more stable rates of residential and commercial construction this past decade, compared with previous years, the Planning Board continues to be busy. The Exeter Planning Board has had the most and largest development projects under review ever. More recently, a 300,000 sq.ft. strip mall / commercial development project was approved along Routes 2 and 3.



## **Scott Millar, Exeter Planning Board (continued)**

Over the past decade residential and commercial construction has been incremental, not overly dramatic. Agricultural lands have been preserved along the Route 2 corridor, although Bald Hill Nursery may soon be lost to development. Deed restrictions on new development have raised conflicts in values between established and new residents. There has been a noticeable increased demand on services.

Last year the Exeter Planning Board and the former Town Council had discussed a conceptual plan for a compact growth village center outside the former Ladd Center on Route 2. URI is currently completing a groundwater study to determine an appropriate rate or density of development for the area. Newly elected Town Council members aren't as supportive of the growth center or the proposed commuter rail station as the former Town Council was.

The Route 2 corridor could see growth through development, as the agricultural lands are not protected from residential development.





## **John LaPoint, MBTA Advisory Committee Member – Grafton, MA**

The Grafton Station was formerly a State institution covering almost 1,400 acres. The new commuter rail station and was used as an economic development tool for a declining area, along with a new Veterinary School as a \$3 million engine for the development of office space/industrial park. Ridership from the Grafton commuter rail station project has exceeded expectations. Home values have increased and local politicians are clamoring for more trains as ridership is near capacity - a rather unique situation, as Millbury and Westborough (towns adjacent to Grafton) fought to keep the commuter rail stations out of their areas. Growth in the area (and west) is considered fueled by access to the Mass Turnpike, I-495, and Boston workers and not necessarily by commuter rail stations. Growth has also been fueled by availability of lower priced property (compared to metro Boston) in areas along these transportation routes. Marlboro, Milford, and Westborough are now considered 'Edge Cities.'



**John LaPoint, MBTA Advisory Committee Member – Grafton, MA**  
(Continued)

In general, the Commonwealth Development Corporation is looking at Smart Growth, with many TODs planned for MA. Every town on the Worcester rail line is looking at 200 to 400 unit TODs centered on the train stations. MA and RI need to collaborate more to capture tourism opportunities associated with the Blackstone Valley National Heritage Corridor. Economic development in Grafton's Centrex Industrial Park could not have happened without the station. JobCorp and the Tufts Veterinary School have assisted by anchoring the industrial park.

Although I am very supportive of commuter rail service in Grafton, not everyone in town feels that the town has changed for the better since commuter rail service was restored. The average home price went from \$350,000 to mid \$500,000. Rents for a 2 bedroom apartments went from \$650-750 to \$1,000-1,200. Lessons learned include – if the train comes and you have available land for development, growth will happen. Grafton, MA is very similar to Wickford, RI without waterfront, both are classical New England towns. Grafton has received mitigation funding for traffic lights from the MBTA.



# Part 4: Public Comment

1. Local roads such as Old Baptist Road are already congested. Increased development and use of this road to access the station will increase congestion. Local bus service is needed to provide connections to the station.
2. Route 4 was the impetus for growth in South County. Commuter rail will just provide a commuting option for residents who already live here. Rail service will help improve air quality.
3. To make TOD work, transit options (including walking, bicycling, and bus service) are needed to reduce vehicle access to the station. Intermodal connections are important; bike paths on arterial roads aren't as good as off-road bike paths for regular use. A regional bus system is needed to bring commuters to the station without their cars.



## Public Comment (continued)

4. The North Kingstown Planning Board does not consider Transfer of Development Rights (TDR's) as a viable tool for managing growth. Only marginal land remains for development or preservation of open space.
5. Reverse commute service should be considered to Davisville, to reduce traffic as Quonset Point grows. A station at Davisville would be an economic engine for development. Wickford Junction does not need or want an impetus for more economic development.
6. Weekend and evening service should be provided to encourage use of train service for evening events in Providence. Weekend service could provide access to tourists. Connections to the Martha's Vineyard ferry from Quonset or to South County beaches could help reduce traffic on Route 4.



## Public Comment (continued)

7. Wickford Junction should not become the Route 128 station of Rhode Island (a major parking garage for Amtrak and MBTA commuter service on I-95 in Canton, MA).
8. Transit Oriented Development is not feasible at Wickford Junction because all developable land is spoken for and the groundwater overlay district restricts density (no municipal sewers are available in this area).
9. If all the proposed stations along the Northeast Corridor (NEC) were constructed, collectively, they would alleviate pressures on Wickford Junction. Washington County communities should lobby for commuter rail service the way East Greenwich and Pawtucket are doing.



# Task 1 Conclusions

- MBTA commuter rail service will begin in 2007 with service to Wickford Junction as the highest priority for rail service south of Providence.
- Commuter rail will serve existing residents and attract others. Traffic congestion to Providence is not so great that people are searching for alternative means of transportation. The schedule may not be attractive for Providence workers since southbound departures are late in the day.
- Service to Boston will be attractive for current residents. Although this service may be expected to attract Boston workers who are looking for more affordable real estate, the price differential between Massachusetts and Rhode Island is narrowing and with local property tax considerations may not be as attractive as it seemed in the past.



# Conclusions (continued)

- Both Exeter and North Kingstown are attractive Washington County communities. All types of housing units are in demand, including high density condominiums and townhouse apartments.
- With the availability of commuter rail service, home values may be expected to increase as the demand for residential units exceeds the available supply. Development pressure will be especially intense in eastern Exeter and southern North Kingstown, areas within a 10-minute drive of the Wickford Junction Station.
- Although most new construction is for single family homes, there is a demand for all types of housing including higher density condominiums and apartments.
- It is critical for Washington County communities to have growth management strategies implemented before this increase in growth/demand results.



# Conclusions (continued)

## Exeter

- A growth center is proposed by the Town of Exeter outside the Ladd Center on Route 2. URI is completing a study on the appropriate density of development.
- The largest potential growth areas are north and south along Ten Rod Road (Route 102) in Exeter. Hundreds of acres of agricultural lands could be consumed by residential development, especially along the Route 2 corridor in Exeter.
- Residential zoning requires a 2-acre to 5-acre lot. No municipal sewer or water service is provided in town. No conservation or cluster zoning is provided for increased lot density.
- Environmental constraints such as the Queen's River Aquifer, Sodom Brook, and Fisherville Brook as well as limited connecting/maintained roadways will likely concentrate growth in specific areas in Exeter.





# Conclusions (continued)

## North Kingstown

- A growth center is proposed in North Kingstown on Post Road. Neither the Exeter nor North Kingstown growth centers are in walking distance of the station.
- Wickford Junction Station is located in the groundwater recharge and wellhead protection overlay district. Average residential density shall not exceed one dwelling unit per two acres. Typical high density transit oriented development will therefore not be appropriate for Wickford Junction.
- Growth may be anticipated in the top seven areas identified in the build out analysis, concentrated in the southern and north-northwest sections of town.
- Without building caps in North Kingstown, new residential development will likely continue to meet residential demands



# Next Steps...

- Wickford Junction focus
- Smart growth techniques and tools
- Develop Transit-Oriented Development performance standards
- Public Meeting – May 2005
- Final report – June 2005

